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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/598,718	12/12/2007	Marco Secondini	4015-5836 / P63965/X18	9286
24112 7590 08/12/2010 COATS & BENNETT, PLLC 1400 Crescent Green, Suite 300 Cary, NC 27518			EXAMINER PASCAL, LESLIE C	
			ART UNIT 2613	PAPER NUMBER
			MAIL DATE 08/12/2010	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/598,718	Applicant(s) SECONDINI ET AL.	
	Examiner Leslie Pascal	Art Unit 2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 29-58 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 29,31-35,42,43,45-49 and 56-58 is/are rejected.
- 7) ☒ Claim(s) 30,36-41,44 and 50-55 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2613

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 57-58 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 57 claims a method of transmitting, yet the entire claim is drawn to receiving.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 29, 31, 43, 45 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Madsen (2004/0208604).

Madsen teaches receiving from an optical fiber (in), filtering (104, 108, 110) based on a transfer matrix (paragraph 40) which is dynamically controlled (paragraph 21, feedback). He teaches that this eliminates distortion and mutual interference effects and apparently obtains an approximate repetition of the respectively produced optical signals at an output of the receiver. Although he does not specifically teach details of the transmitter, he teaches that the signal received is received by a single fiber on a single wavelength. It would have been obvious to send two orthogonal states using a pair of transmitters in order to provide the signals that are divided in order to properly divide and control them. In regard to claim 31, see figure 1a.

5. Claims 29 and 43 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noe (2003/0175034).

Noe teaches a pair of transmitters () which send signals having orthogonal states of polarization (paragraph 44), a receiver which filters the two components (paragraph 52) according to a transfer (he teaches that there is a polarization transformer which could obviously use a transfer function). He teaches that this eliminates distortion and mutual interference and obviously appears to obtain an approximate repetition of the respectively produced optical signal at the output of the receiver.

6. Claims 32-35, 46-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Madsen (2004/0208604) as applied to claim 29 above, and further in view of Noe (2003/0175034).

Madsen teaches that he uses feedback (paragraph 21). He does not teach details about the feedback. Noe et al teaches that it is well known to use photo detectors for the feedback and to provide clock signals and control signals for the filtering that provides polarization mode compensation. It would have been obvious to use photo detectors and feedback signals similar to the ones taught by Noe in the system of Madsen since it is obvious that photo detectors would be required for a feedback signal.

7. Claims 42 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Madsen in view of Noe as applied to claim 31 and 45 above, and further in view of Bulow (2005/0254797).

Art Unit: 2613

Although Madsen does not teach specifics about his demultiplex device, Bulow teaches that it is well known to use polarization controllers and polarization maintaining fibers in series. It would have been obvious to use such elements in the demultiplexer/ polarization controlling device of Madsen in order to provide the required polarization control.

8. Claims 30, 36-41, 44 and 50-55 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Claim 58 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leslie Pascal whose telephone number is 571-272-3032. The examiner can normally be reached on Monday- Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on 571-272-3078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2613

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free)? If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Leslie Pascal/
Primary Examiner
Art Unit 2613